RIVETT

OPERATING AND MAINTENANCE INSTRUCTIONS

RIVETT LATHE & GRINDER Inc.
BRIGHTON · BOSTON · MASS · U · S · A ·

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Installation Instructions for 1020 Lathe

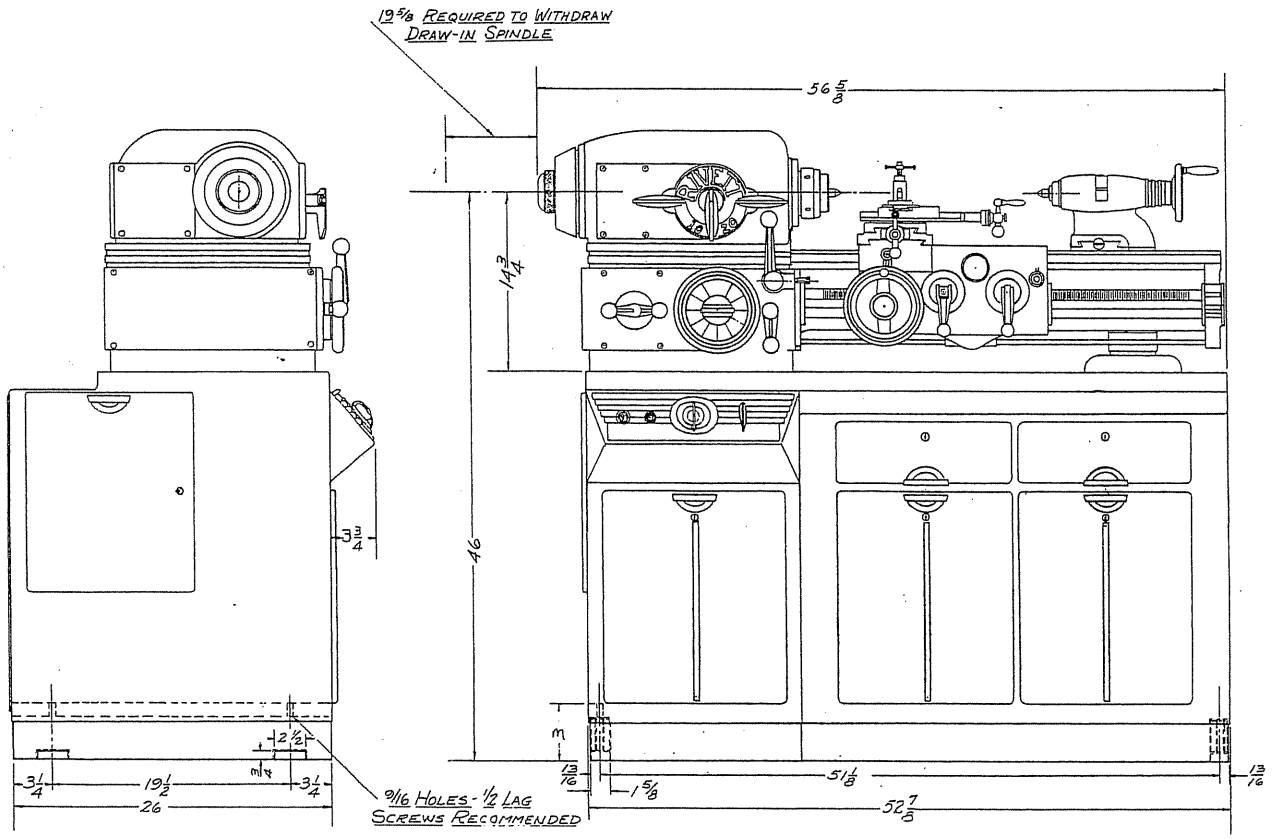
Item 1 - Receiving and Unpacking

If any damage is noticed to packaging, machine or parts, call representative of delivering carrier to inspect condition before removing crate or taking parts from boxes and enter claim against transportation company. The shipper holds receipt in good order for the entire consignment. If any shortage exists, reexamine packing material before discarding. Small pieces may easily be lost unless all excelsior and wrapping paper is thoroughly overhauled.

Carefully unpack, using nail puller for removing crate, box covers and braces. Check all items against packing list. Remove slushing grease using fresh cotton waste or cloth and gasoline or kerosene. Immediately go over all polished and scraped surfaces with oily rag.

Item 2 - Setting Up

Locate cabinet and level same, using precision level on lathe bedways in both directions, lengthwise and crosswise. Allow space behind cabinet for free circulation of air from vents in motor compartment. Fasten to flooring with lag screws or bolts, see Floor Plan below.



FLOOR PLAN
1020 LATHE
RIVETT LATHE & GRINDER INC.
BOSTON, MASS.
E-2146

PRECAUTIONARY INSTRUCTIONS
RIVETT NO. 1020 LATHE

NOTE: The following should be carefully noted by supervisor and operator and used in conjunction with complete instruction book furnished with the lathe.

1. **DON'T allow anyone to operate this lathe until he has read these "DON'TS" and also the lathe Instruction Book and thoroughly understands all controls and functions.**

2. **DON'T attempt to put any actual work on lathe until it has been run-in by a competent operator and is fully understood and is functioning smoothly. This "DON'T" applies to all fine, new machine tools.**

3. **DON'T ever allow anyone to lubricate lathe except with clean oil or grease of suitable type.**

4. **DON'T move the carriage on the lathe bedways until you have thoroughly cleaned off the slushing grease and oiled the ways with proper oil. See Instruction Book, Item 1 and Item 22. Remove slide rest and note ball oilers in top surface of carriage saddle.**

5. **DON'T attempt to move carriage until after releasing carriage binder No. 31.**

6. **DON'T attempt to traverse carriage by either lead screw or feed rod until you have run same back and forth a number of times full length of bed by hand wheel to spread oil film.**

7. **DON'T attempt to run lathe when spindle is in locked position as described Item 6.**

8. **DON'T attempt to throw Feed Control Handle No. 22, which engages reversing clutch, when spindle is running faster than 450 r.p.m.**

9. **DON'T use lathe at high speeds when set for coarse threads or coarse feeds.**

10. **DON'T attempt to thread or power feed until you have thoroughly mastered the method of engaging selector tumbler gear, see Item 9.**

11. **DON'T shift lever No. 17, marked "A", when lathe spindle is turning under power.**

12. **DON'T shift lever No. 18, marked "B", when lathe spindle is turning faster than 100 r.p.m.**

13. **DON'T operate cross feed too far in either direction as doing so will jam gears.**

14. **DON'T take the risk of running carriage by power against headstock or tailstock, — set carriage safety stops.**

15. **DON'T attempt to use carriage stops when lathe spindle is running in reverse.**

16. **DON'T attempt to use power cross feed without first freeing ball stop binder screw No. 8.**

17. **DON'T remove slide rest from lathe saddle without first closing elevator gear cover No. 11.**

RIVETT LATHE & GRINDER INC.

Operating Instructions for 1020 Lathe

The Rivett 1020 Cabinet Lathe is a high grade precision tool room machine and should be treated as such. All controls are conveniently placed at the operator side. Safety interlocks and stops are provided. Ample space has been designed for the placing of tools both on lathe and in cabinet. Wrenches necessary for operation and maintenance are included.

Before starting machine, oil thoroughly, study instructions and all operation plates, particularly thread and feed dial plate, reproduced on Page 6. Until thoroughly acquainted with the lathe, it is recommended that the operator go through each step exactly as given in these instructions.

The lathe has been built to maintain its precision and appearance over a long period of time, and should be cleaned and oiled daily.

Precautionaly Instructions on durable, glazed card (see copy on Page 2) are shipped with each lathe. The purpose of these instructions is to assist the operator in prolonging the life of this precision tool. The instruction card should be mounted so that the operator will see it when working, and so that any new operator or other employee may be duly cautioned not to mishandle the lathe.

Headstock and Quick Change Gearing

The headstock controls, Clutch Lever (No. 3), Spindle Gear Lever (No. 4), and Back Gear Lever (No. 5) - see Page 5, are mounted at the front of the head and are operated by pull-out and turning movements. Lever No. 3, marked CLUTCH, operates a jaw clutch sliding on a multi-splined spindle.

Item 3 - To Drive Spindle with Open Belt

Move lever No. 3 counterclockwise to horizontal position. The spindle is now connected to the driven sheave which is its source of power. Move lever No. 5, marked BACK GEARS, clockwise to horizontal position. The spindle will now turn at open belt speeds.

Item 4 - To Drive Spindle Through Back Gears

Stop machine. With levers in open belt positions, see Item 3, swing lever No. 5 counterclockwise, engaging back gears, to its locked angular position. The spindle is now locked. Swing lever No. 3 clockwise disengaging the clutch. The spindle will now turn at back gear speeds.

Item 5 - To Turn Spindle Freely

With levers No. 3 and No. 5 in positions as described in Item 4, swing lever No. 5 clockwise to its horizontal position. The spindle is now disengaged from its drive and will turn freely by hand-wheel No. 2.

Item 6 - To Lock Spindle for Replacing Attachments

Move lever No. 3 to its horizontal position and move lever No. 5 to its angular position. The spindle is now locked.

Operating Instructions for 1020 Lathe

Item 7 - To Mount Spindle Nose Attachments

Lock spindle, see Item 6. Turn Spindle Nose Nut (No. 6) clockwise, using single spanner wrench, until nose guard or nose attachment rides loosely on the spindle and then remove same by hand. To replace attachment, reverse sequence of operations. Only a slight counterclockwise pressure is necessary to lock attachment securely to spindle. Spindle key prevents any accidental backing off.

Item 8 - To Mount Spindle Mouth Attachments

Turn knurled Draw-in Spindle Knob (No. 1) clockwise to draw in collets, etc. Single spanner wrench used on spindle nose nut also fits this knurled knob.

Item 9 - To Set Up Compounds for Thread Cutting or Feed Rod Turning

(1) Set lathe for open belt turning - see Item 3. (This makes gear shifting much easier.)

(2) Set Lever No. 4 so that its pointer matches index line marked Feed. (This gear engages gear box with spindle.)

(3) Set Feed Control Handle (No. 22) for right or left hand thread.

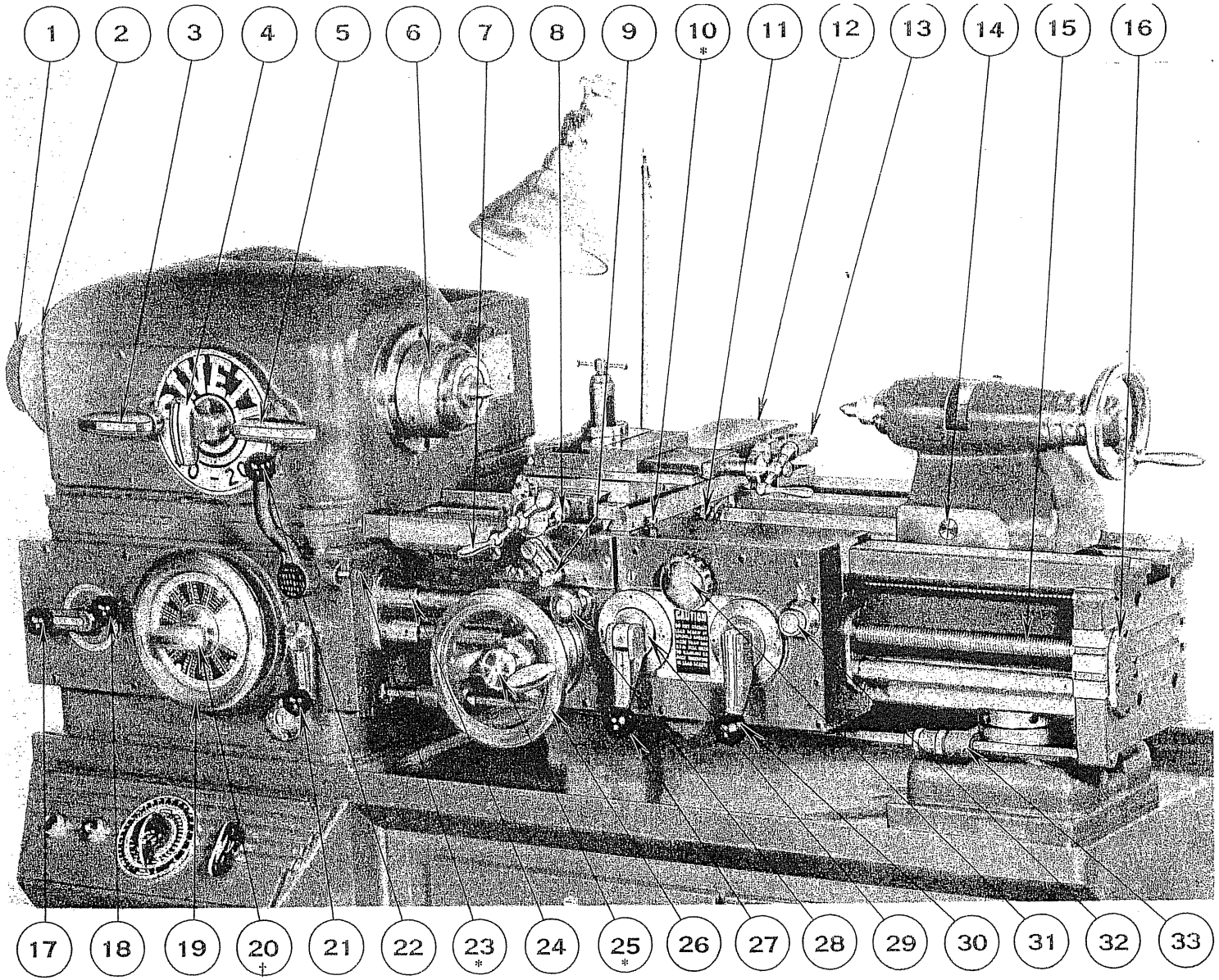
(4) Unlock Tumbler Pivoting Handle (No. 20) and rotate tumbler to disengaged position and lock. (Swinging handle 180° unlocks by disengaging its locking pin, and rotating handle clock-wise as far as it will go disengages tumbler gear from nest of compounds. Swinging handle 180° back to original position relocks by re-engaging locking pin.)

(5) Turn Tumbler Selector Wheel (No. 19) until group in which selected thread or feed appears matches indicator.

(6) Set Compound Levers 'A' and 'B' (No. 17 and No. 18) according to information on index plate. For example for 32 threads per inch = A-3, B-1. Settings and threads (or feeds) are on corresponding lines on dial.

(7) Rotate Handle No. 20 counterclockwise until proper group number on its hub matches same number on hub of selector wheel No. 19 (8-8, 9-9, etc.). Lock Handle No. 20. (Swinging Handle back 180° reengages its locking pin, - plunger snapping out in this position proves that pin has engaged.)

(8) Select proper spindle speed. (If lathe has Jackshaft Drive, see Speed Chart inside of cabinet door, or if Variable Speed Drive, see speed dial on control panel.)



1. Draw-in Spindle
2. Spindle Hand-wheel
3. Clutch Lever
4. Spindle Gear Lever
5. Back Gear Lever
6. Spindle Nose Nut
7. Cross Feed Screw Handle
8. Ball Stop Binding Screw
9. Elevator Gear Lever

*10. Slide Rest Binding Screws

11. Elevator Gear Sliding Cover Handle
12. Slide Rest Chip Cover
13. Taper Attachment Slotted Bracket
14. Tailstock Adjusting Screws
15. Lead Screw
16. Lead Screw Bearing Retaining Plate
17. Compound (A) Lever
18. Compound (B) Lever
19. Tumbler Selector Wheel

† 20. Tumbler Pivoting Knob

21. Lead Screw — Feed Rod Selector
22. Feed Control Handle

* 23. Feed Control Handle Locking Pin

24. Lead Screw Locking Screw

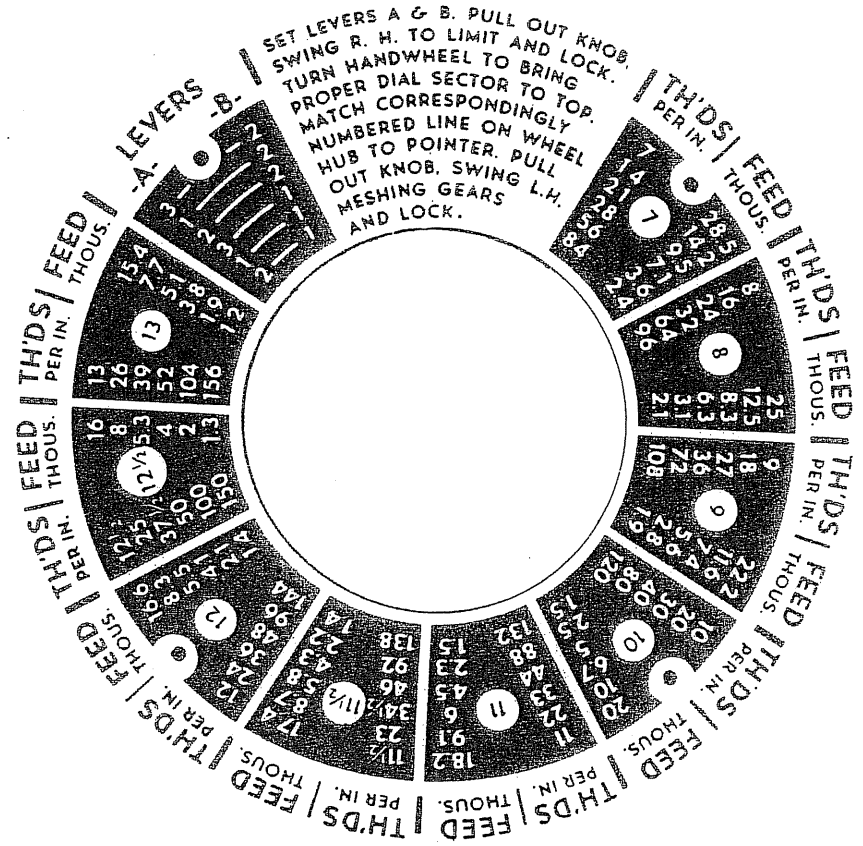
* 25. Gear Train Release Knob

26. Carriage Traverse Hand-wheel
27. Friction Handle
28. Feed Selector Knob
29. Friction Adjusting Screw
30. Lead Screw Nut Operating Handle
31. Carriage Binder
32. Thread Dial Knob
33. Automatic Carriage Stops

* Omitted in lathes shipped after Dec. 1, 1941

† Superseded by lever in lathes shipped after Dec. 1, 1941

THREAD AND FEED DIAL



THE RIVETT 1020 LATHE WILL CUT, THRU QUICK CHANGE GEARS, ALL STANDARD THREADS LISTED BELOW.

S.A.E. STANDARD THREADS							
SIZE	N.C	N.F.	E.F.	SIZE	N.C.	N.F.	E.F.
0		80		9/16	12	18	24
1	64	72		5/8	11	18	24
2	56	64		3/4	10	16	20
3	48	56		7/8	9	14	20
4	40	48		1	8	14	20
5	40	44		1 1/8	7	12	18
6	32	40		1 1/4	7	12	18
8	32	36		1 3/8		12	18
10	24	32		1 1/2		12	18
12	24	28		1 3/4			16
1/4	20	28	32	2			16
5/16	18	24	32	2 1/4			16
3/8	16	24	32	2 1/2			16
7/16	14	20	28	2 3/4			16
1/2	13	20	28	3			16

B.S.F. – BRITISH ST'D. FINE					
SIZE	THDS	SIZE	THDS	SIZE	THDS
7/32	28	9/16	16	1 1/8	9
1/4	26	5/8	14	1 1/4	9
9/32	26	11/16	14	1 3/8	8
5/16	22	3/4	12	1 1/2	8
3/8	20	13/16	12	1 5/8	8
7/16	18	7/8	11	1 3/4	7
1/2	16	1	10	2	7

AMERICAN ST'D. PIPE THREADS					
SIZE	THDS	SIZE	THDS	SIZE	THDS
1/8	27	1	11 1/2	3	8
1/4	18	1 1/4	11 1/2	3 1/2	8
3/8	18	1 1/2	11 1/2	4	8
1/2	14	2	11 1/2	4 1/2	8
3/4	14	2 1/2	8	5	8

BR.ST'D.WHIT	
SIZE	THDS
1/4	20
5/16	18
3/8	16
7/16	14
1/2	12
9/16	12
5/8	11
11/16	11
3/4	10
13/16	10
7/8	9
15/16	9
1	8
1 1/8	7
1 1/4	7

Item 10 - Thread Cutting

Having set up, per Item 9, for suitable feed and spindle speed, carry out the following steps: -

(1) Set Selector Handle (No. 21) to operate lead screw.

(2) Set Feed Selector Knob (No. 28) to neutral (hair line comes to edge of hole).

(3) Swing Lead Screw Nut Operating Handle (No. 30) counterclockwise to engage nut.

(4) Check setting of Feed Control Handle (No. 22) This handle was set either right or left per Item 9 (3) above to enable meshing of compounds). To Left is for R. H. threads or to Right is for L. H. threads. (Handle operates a reversing clutch.)

(5) Set Automatic Carriage Stops (No. 33) to prevent tool overrunning. (See Item 15.)

Note: - Use Thread Dial on long threads - see Item 11.

Item 11 - To Use Thread Dial

Use of thread dial in cutting long threads is recommended.

Thread dial should be used whenever possible for indexing double and quadruple threads.

Disengage when not required to save wear on bronze gear.

Item 12 - Feed Rod Turning

Having set up per Item 9 for suitable feed and spindle speed, carry out the following steps: -

(1) Set Handle No. 21 to operate feed rod.

(2) For Cross Feed - push Knob No. 28 in and turn left to lock (slightly turning Cross Feed Screw Handle(No. 7) will aid in meshing gears - see Item 13).

(3) For Carriage Feed - pull Knob No. 28 out and turn left to lock (slightly rotating Carriage Traverse Handwheel(No. 26) will aid in meshing gears).

(4) Set Handle No. 22 to give desired direction of feed, (cf. Item 10 (4) above). DO NOT shift this handle at spindle speeds greater than 450 R.P.M.

(5) Swing Friction Handle (No. 27) upward to engage carriage friction clutch.

Operating Instructions for 1020 Lathe

Item 13 - Operation of Slide Rest

Normally the slide rest should remain on carriage saddle. If for any reason it has been removed, clean dove-tail of saddle thoroughly before remounting as follows: -

(1) Mount slide rest on saddle - match arrows at left side of both members.

(2) Lock slide rest to saddle by means of fillister head screw at left rear of slide rest base engaging tapped hole in saddle.

Note: A second tapped hole, 1" toward front of saddle from this hole, is provided for setting slide rest in extreme forward position for extra large diameter to be machined. Cross feed in this setting by hand only.

(3) Turn Knob No. 11 clockwise to uncover elevator gear.

(4) Unscrew Knurled Knob on Elevator Gear Lever (No. 9) and swing lever counterclockwise until gears mesh - (slightly turning cross feed screw handle No. 7 will aid in meshing gears) and lock by screwing in Knurled Knob.

(5) Before using power cross feed, release Ball Stop Binding Screw (No. 8).

When slide rest is to be removed, lower elevator gear by swinging Lever 9 clockwise and lock by Knurled Knob. Close slide to exclude chips and dirt from carriage.

Item 14 - To Mount Carriage Attachments

Remove slide rest from carriage saddle. Mount Tee Rest or other plain slide rest attachment by engaging dove-tail and sliding to desired transverse position and bind. To position Universal Carriage Milling Attachment, match arrow on attachment base with arrow on saddle to assure alignment of elevator gear.

Item 15 - Carriage Stops

Micrometer Stops (No. 33) to right and left of carriage operate stop rod in both directions. Lock in approximate desired positions on rod by tightening set screws against flat on rod, and obtain exact carriage stop positions by screw adjustment on graduated dials which are then locked by means of knurled nuts.

Item 16 - To Set Up for Special Threads

Remove rectangular plate at left end of lathe housing and set up quadrants and gears per Gear Table 94. Quadrants and pick-off gears, required for special threads, are not standard equipment with lathe.

Item 16A - To Cut Multiple Threads

Most double and quadruple threads can be cut by proper sequence of engagement between lead screw nut and eight pitch lead screw employing Thread Dial for indexing, (see G. T. 96, Page 10) as follows:

(1) Set up to cut desired lead, using method outlined for single threads, see Item 9.

(2) Cut first thread to desired depth, noting on thread dial the point at which nut engages lead screw.

(3) Start parallel thread by engaging lead screw with nut at point prescribed by Table, G.T.-96, Page 10, located by graduations on thread dial.

To cut such double and quadruple threads as cannot be obtained by indexing with Thread Dial and for triple and sextuple threads use G.T. 96 Spindle Indexing Method and proceed as follows:

(1) Set up to cut desired lead, using method outlined for threads, See Item 9.

(2) Cut first thread to desired depth and return carriage to starting position.

(3) With power off, reengage clutch (No. 22) or nut (No. 30) or both, as though recutting the first thread.

(4) Turn headstock spindle by hand in cutting direction until all back lash has been taken up (this is noted when carriage begins to move) and index line on spindle matches zero point on plate at left end of headstock. Index lines are visible through hole in spindle hand wheel No. 2.

(5) Disengage Compound 'B' (Lever No. 18), swing lever as far as it will go, (i.e. if 'B' is in 1 swing toward 2, or conversely if in 2 swing toward 1, until gears are felt to touch), and then retract to neutral detent which is between 1 and 2 (this procedure is necessary to assure disengagment of gears).

(6) Turn headstock spindle in cutting direction until index line on spindle matches desired fractional index line on fixed ring, 1/4 or 1/3 etc. Note: This operation is carried out in conjunction with operation (7) below.

(7) Reengage Compound 'B'. (To facilitate engagement of Compound 'B' for this setting, turn spindle till hairline is about 1/8 short of desired fractional division on fixed ring. Now return Compound 'B' to detented driving position by easing spindle forward until gears mesh and hair-line matches fractional division.) Now cut second thread.

Operating Instructions for 1020 Lathe

(8) Repeat steps 3 - through 7 for third thread. For sextuple, repeat again three more times.

MULTIPLE THREAD CUTTING ~ RIVETT 1020 LATHE

SPINDLE
BRING INDEX LINE TO ZERO MARK
DISENGAGE COMPOUND "B"
INDEX TO LISTED FRACTION ~ SEE CHART
REËNGAGE COMPOUND "B"

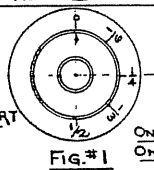


FIG. #1

ONE GRADUATION = ONE THD OF LEAD SCR.

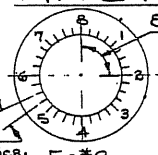


FIG #2

8 GRADUATIONS = 1" OF LEAD SCREW
THREAD DIAL
DISENGAGE LEAD SCREW NUT
INDEX LISTED NUMBER OF GRADUATIONS ~ SEE CHART
REËNGAGE LEAD SCREW NUT

THDS PER INCH	LEAD IN INCHES	DOUBLE METHOD	DOUBLE INDEX	DOUBLE FIG.	DOUBLE PITCH	TRIPLE METHOD	TRIPLE INDEX	TRIPLE FIG.	TRIPLE PITCH	QUADRUPLE METHOD	QUADRUPLE INDEX	QUADRUPLE FIG.	QUADRUPLE PITCH	SEXTUPLE METHOD	SEXTUPLE INDEX	SEXTUPLE FIG.	SEXTUPLE PITCH
*2	.500	THD DIAL	2	2	.250	SPINDLE	1/3	1	.167	THD DIAL	1	2	.125	SPINDLE	1/6	1	.083
*3	.333	THD DIAL	4	2	.167	"	1/3	1	.111	THD DIAL	2	2	.083	"	1/6	1	.056
*4	.250	THD DIAL	1	2	.125	"	1/3	1	.083	SPINDLE	1/4	1	.063	"	1/6	1	.042
*5	.200	THD DIAL	4	2	.100	"	1/3	1	.067	THD DIAL	2	2	.050	"	1/6	1	.033
*6	.167	THD DIAL	2	2	.083	"	1/3	1	.056	THD DIAL	1	2	.042	"	1/6	1	.028
7	.143	THD DIAL	4	2	.071	"	1/3	1	.048	THD DIAL	2	2	.036	"	1/6	1	.024
8	.125	SPINDLE	1/2	1	.063	"	1/3	1	.042	SPINDLE	1/4	1	.031	"	1/6	1	.021
9	.111	THD DIAL	4	2	.056	"	1/3	1	.037	THD DIAL	2	2	.028	"	1/6	1	.019
10	.100	THD DIAL	2	2	.050	"	1/3	1	.033	THD DIAL	1	2	.025	"	1/6	1	.017
11	.091	THD DIAL	4	2	.045	"	1/3	1	.030	THD DIAL	2	2	.023	"	1/6	1	.015
11½	.087	SPINDLE	1/2	1	.044	"	1/3	1	.029	SPINDLE	1/4	1	.022	"	1/6	1	.014
12	.083	THD DIAL	1	2	.042	"	1/3	1	.028	SPINDLE	1/4	1	.021	"	1/6	1	.014
13	.077	THD DIAL	4	2	.038	"	1/3	1	.026	THD DIAL	2	2	.019	"	1/6	1	.013
14	.071	THD DIAL	2	2	.036	"	1/3	1	.024	THD DIAL	1	2	.018	"	1/6	1	.012
15	.067	THD DIAL	4	2	.033	"	1/3	1	.022	THD DIAL	2	2	.017	"	1/6	1	.011
16	.063	SPINDLE	1/2	1	.031	"	1/3	1	.021	SPINDLE	1/4	1	.016	"	1/6	1	.010
17	.059	THD DIAL	4	2	.029	"	1/3	1	.020	THD DIAL	2	2	.015	"	1/6	1	.010
18	.056	THD DIAL	2	2	.028	"	1/3	1	.019	THD DIAL	1	2	.014	"	1/6	1	.009
19	.053	THD DIAL	4	2	.026	"	1/3	1	.018	THD DIAL	2	2	.013	"	1/6	1	.009
20	.050	THD DIAL	1	2	.025	"	1/3	1	.017	SPINDLE	1/4	1	.013	"	1/6	1	.008

*= USE PICK-OFF GEARS

C.B.S. 1-1-42

GT-96

Item 17 - To Set Up and Operate Taper Attachment

Mount taper attachment in slot at rear of bed, set to desired position and bind. Disconnect slide rest from gear train by lowering elevator gear and remove locking screw (cf. Item 13 (2) above). Close elevator gear slide cover. Slide rest is now free on carriage saddle. Attach slotted connecting bracket to slide rest and mount taper attachment slide on swivel bar. Avoid positioning slide rest in such a way as to allow it to be transversed too far in either direction by taper attachment.

Maintenance Instructions for 1020 Lathe

Item 18 - To Replace Spindle Vee Belts

Vertical matched Vee belts from drive to lathe spindle may be replaced at any time without disturbing drive or removing lathe spindle or headstock. Remove draw-in spindle, loosen handwheel nut with special spanner wrench provided and draw assembly of wheel, sleeve and nut off lathe spindle. Take out three Allen cap screws and remove cover plate at left end of headstock. Remove Vee belts from driving sheave below and withdraw through uncovered opening. Slip new belts one at a time downward through uncovered opening and place on spindle sheave. Finally, place belts on driving sheave. Replace plate and hand-wheel and lock the latter by tapered sleeve and nut.

Item 19 - To Adjust Carriage Friction Clutch

Loosen set screws in Friction Adjusting Screw Plate (No. 29) and rotate plate counterclockwise to increase or clockwise to decrease clutch friction. Retighten set screws.

Item 20 - Gear Box Lubrication

Flood lubrication is provided by a gear pump, having pressure relief and by-pass, belted to the motor. The lubricating system is protected by a filter which requires occasional care, see filter instructions on inside of cabinet door. Oil in gear case should show half way in the sight glass at head end of bed. Filler plug is in rear of headstock. Heavy transmission oil is used. At least once a year, drain all oil out of case and replace with new. Drain plug is in tee directly under cabinet top.

Item 21 - Headstock Lubrication

All headstock bearings are grease packed in assembly and should not be relubricated, under normal operating conditions, for several months after machine has been put into operation. Approximately one cubic inch per lubrication point may be introduced by grease gun at the following locations: (1) headstock front bearings - pipe plug, directly below spindle; (2) headstock rear bearing - pipe plug, under removable strip at left end of bed directly below hand-wheel; (3) headstock back gear bearing right - pipe plug at top side of serial number plate; (4) headstock back gear bearing left - pipe plug under square plate at left end of headstock. It is very important to guard against introducing particles of grit, or any foreign matter when lubricating.

Item 22 - Recommended Lubricants

The following or equivalent lubricants are recommended.

Gear Box	S.A.E. 50
Headstock	New York, New Jersey S59 Non-Fluid Oil
Sliding Surfaces	S.A.E. 50
Carriage Well	XX Machine

Operation and Maintenance Instructions for Motor Jackshaft Drive

Item 23 - Operation and Maintenance Instructions for Motor Jackshaft Drive

The two speed motor is controlled by a drum switch or push buttons or both, (depending upon the electrical specifications) mounted in the headstock end of the cabinet. The motor provides two speeds forward and reverse in each range. Four ranges are available by shifting Vee belts on motor and jackshaft four-step sheaves. Motor mounts on pivoted cradle with screw adjustment for belt tension and with toggle release to facilitate shifting Vee belt. Toggle is self-locking by powerful spring and automatic latch. Cradle hand lever actuates the latch automatically and also by automatic catch holds cradle in belt release position. The jackshaft carries double sheave for driving spindle and has vertical adjustment for tensioning Vee belts. A solenoid brake applies to drum when control is set at STOP.

Jackshaft carrying double sheave which drives spindle is mounted on self-aligning ball bearings supported in bracket with height adjustment. Two binding screws, one behind each bearing housing, hold bracket in desired position. To retention belts, loosen binding screws, swing bracket up or down as required and retighten screws.

A single Vee belt, on four-step sheaves, driving jackshaft from motor, is tensioned by setting of two screw stops on which hinged motor plate rests. Vee belt is easily replaced as both sheaves are outboard of bearings.

If motor is sleeve bearing type, check oil level in cups with motor tilted forward to belt release position. When oil cup covers are lifted, if oil does not flow out, fill with oil until cup overflows. This is the correct level in oil chamber. Motor chambers should be checked monthly or oftener for oil level by the same process. DRIVE SHOULD NEVER BE RUN IN BELT RELEASE POSITION, but always in locked driving position. These oilers are 'Forkup' patented control feed type, and provide against drainage of oil from motor oil chambers when in belt release position. Lubricate upper shaft bearings using grease gun on two Alemite fittings.